

## ABSTRACT

A growing body of HCI4D research studies the use of SMS communication to deliver health and information services to underserved populations. This paper contributes a novel dimension to this field of study by examining if a hybrid computer-human SMS system can engage pregnant women in Kenya in health-related communication. Our approach leverages the different strengths of both the computer and the human. The computer automates the bulk-sending of personalized messages to patients, allowing the human to read patients' replies and respond to those in need of attention. Findings from a 12-month deployment with 100 women show that our approach is capable of engaging the majority of participants in health-related conversations. We show that receiving messages from the system triggers participant communication and the amount of communication increases as participants approach their expected due date. In addition, analysis of participants' messages shows that they often contain sensitive health information conveyed through a complex mixture of languages and 'txting' abbreviations, all of which highlight the benefits of including a human in the workflow. Our findings are relevant for HCI researchers and practitioners interested in understanding or engaging underserved populations.